

granulosus protoscoleces from Sheep hydatid cysts were used in this study. Cysts from newly slaughtered animals were obtained from slaughter house in Kerman. Cyst fluid was drawn and transferred into a conical glasswares and the protoscoleces were collected from the sediment. Protoscoleces washed with saline and their viability rate was assessed by 0.1% Eosin exclusive test. has been prepared concentrations of 50,25,12 and 6.25mg/ml of Piroctone Olamine were treated with the same volume of protoscoleces suspension for 1,5 and 10 minutes in order to evaluate the survival of protoscoleces by Eosin staining. Saturated salt and physiological saline solutions have been used as positive and negative controls respectively. Concentrations of 12,25,50 mg/ml at 1,5 and 10 minutes treatments caused 100% protoscoleces death. At 6.25mg/ml Piroctone Olamine concentration 80%, 93% and 98% of the protoscoleces were killed in 1, 5 and 10 minutes exposure respectively. The minimum effective concentration of Piroctone Olamine on the protoscoleces of *E. granulosus* was 12 mg/ml in one minute exposure. Piroctone Olamine proved to be a promising protoscolicidal agent and further in vivo and vitro studies in this topic are recommended.

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MOLECULAR CHARACTERIZATION OF DIFFERENT ISOLATES OF *ECHINOCOCCUS GRANULOSUS* IN SOUTH WEST OF IRAN

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Hydatidosis is one of the most significant public health problems in different parts of Iran. The aim of this molecular study was to analyze the *E. granulosus* genotypes as the causative agents of hydatidosis in south west of Iran (Khuzestan province). Altogether 334 hydatid cysts were collected from the liver and lungs of sheep (141 isolates), cattle (104 isolates), goat (84 isolates) and human (5 isolates) derived from south west of Iran. DNA was extracted and examined by Nested-PCR of rDNA internal transcribed spacer1 (ITS1) and PCR-RFLP. In addition, fragments of the genes coding for ITS1 were sequenced. The results of PCR-RFLP analysis showed G1 genotype in all humans, cattle, sheep, and goat isolates. According to the results of RFLP patterns, camel strain was not detected in studied region. The molecular typing indicated that the predominant genotype involved in *granulosus* transmission in southwest of Iran is the common sheep strain (G1 genotype) infecting humans, cattle, sheep, and goats. These results may have an important role for hydatid disease control in the studied area.

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GENETIC CLASSIFICATION OF *ECHINOCOCCUS GRANULOSUS* ISOLATES IN ARDABIL PROVINCE: FIRST RECORD OF G3 GENOTYPE FROM HUMAN IN IRAN

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Cystic echinococcosis is endemic in Iran, particularly in Ardabil province, and causes health and economic problems. There are considerable evidences for existence of extensive genetic variation within *Echinococcus granulosus*. Until now, no molecular genetic typing has been carried out in this area. The aim of this study was to identify population genetic structure and genetic variability of *E. granulosus* isolated from livestock and human in Ardabil province. In the present investigation, 55 larval isolates were collected from human (11 isolates), sheep (19 isolates), goat (4 isolates) and cattle (21 isolates). For analysis, the genetic characteristics of *Echinococcus granulosus* isolates, DNA sequencing of mitochondrial cytochrome c oxidase subunit 1 (*cox1*) and NADH dehydrogenase subunit 1 (*nad1*) genes were applied. The sequence analysis of the isolates displayed 9 characteristic profiles in *cox1* sequences and 8 characteristic profiles in *nad1* sequences. Overall, 92% (46/50) and 8% (4/50) of isolates were G1 and G3 genotypes respectively; attentive to that 5 isolates was failed. Based on the results of this study, sheep strain (G1 genotype) was the most prevalent in human, sheep, goat and cattle. The buffalo strain (G3 genotype) was not only demonstrated in sheep (1 isolate) and cattle (1 isolate) but also identified in two human isolates in Iran for the first time. These findings may inform local control programs against echinococcosis in this country.

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STRAIN IDENTIFICATION OF ADULT *ECHINOCOCCUS GRANULOSUS* IN LORESTAN PROVINCE OF IRAN

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Echinococcus granulosus is a common parasite of dogs in Iran. Livestock are usual intermediate host. Intra specific variations have been found in *Echinococcus granulosus*. Adult tapeworm were recovered following necropsy from the intestinal of dogs of two western part of Iran. ITS1 region of rDNA was amplified by BD1 and 4S primers. PCR products (1000bp) were digested with AluI, HpaII, RsaI and TaqI restriction enzymes.